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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/678,268	10/06/2003	Chandrakant D. Patel	200208555-1	3459

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EXAMINER

GONZALEZ, JULIO C

ART UNIT PAPER NUMBER

2834

DATE MAILED: 06/17/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/678,268

Applicant(s)

PATEL ET AL.

Examiner

Julio C. Gonzalez

Art Unit

2834

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 4/25/05.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-34 is/are pending in the application.
- 4a) Of the above claim(s) 20-34 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-8, 14, 15 and 17-19 is/are rejected.
- 7) ☒ Claim(s) 9-13 and 16 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 06 October 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Election/Restrictions

1. Applicant's election without traverse of Group I in the reply filed on 04/25/05 is acknowledged.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1 – 4, 6, 14, 18 and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Maeda et al (US 6,799,282) in view of Tadayon et al (US 2003/0093995).

Maeda et al discloses a system for using waste heat having a thermoelectric converter 60A (see claim 1) for receiving heat, a heat sink 42, a fan 44 blowing heat and the converter 60A being in the path of the blown air (see figure 3) and the heat being converted to electricity for powering the electronic device (column 2, lines 19-23, 39-41) and trickled charging is disclosed (column 9, lines 31, 32). However, Maeda et al does not disclose sending the power directly to a rechargeable battery.

On the other hand, Tadayon et al discloses for the purpose of efficiently extending the life of energy sources, using heat for generating electricity (see figure 1) and the heat is generated by a microprocessor (see box 802 in figure 8) and producing electricity from the heat to power up a battery (see box 806 in figure 8). Moreover, it is disclosed that the battery is rechargeable (box 712 in figure 7; see also figure 2).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to design a system as disclosed by Maeda et al and to modify the invention by sending the power to a rechargeable battery for the purpose of efficiently extending the life of energy sources as disclosed by Tadayon et al.

4. Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Maeda et al and Tadayon et al as applied to claim 1 above, and further in view of Dean et al (US 6,239,513).

The combined system discloses all of the elements above. However, the combined system does not disclose that the device is part of an uninterruptible system.

On the other hand, Dean et al discloses for the purpose of avoiding damages to electronic systems that it is well known in the art to implement uninterruptible power systems to electronics devices (column 1, lines 55-65; column 2, lines 43-46).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to design the combined system above and to modify the invention by using an uninterruptible system discloses for the purpose of avoiding damages to electronic systems as disclosed by Dean et al.

5. Claims 7 and 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Maeda et al and Tadayon et al as applied to claim 1 above, and further in view of Chen et al (US 6,394,175).

The combined system discloses all of the elements above. However, the combined system does not disclose using heat pipes.

On the other hand, Chen et al discloses for the purpose of moving heat efficiently in an electronic device, a heat source 110 connected to a heat sink 155 and the heat sink connected to a plurality of heat pipes 130 (see figure 1).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to design the combined system above and to modify the

invention by using heat pipes for the purpose of moving heat efficiently in an electronic device as disclosed by Chen et al.

6. Claim 15 is rejected under 35 U.S.C. 103(a) as being unpatentable over Maeda et al and Tadayon et al as applied to claim 1 above, and further in view of Baum et al (US 4,449,576).

The combined system discloses all of the elements above. However, the combined system does not disclose explicitly applying the invention to a rack device.

On the other hand, Baum et al discloses for the purpose of removing thermal energy from an electronic enclosure, a rack housing in which electronic devices are connected and removing from heat from the electronic components via the housing (column 1, lines 41-46, 52-55, 64-66).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to design the combined system above and to modify the invention by removing heat from a rack device for the purpose of removing thermal energy from an electronic enclosure as disclosed by Baum et al.

7. Claim 17 is rejected under 35 U.S.C. 103(a) as being unpatentable over Maeda et al and Tadayon et al as applied to claim 1 above, and further in view of Moon et al (US 6,722,139).

The combined system discloses all of the elements above. However, the combined system does not disclose that the apparatus is/forms part of an air conditioning.

On the other hand, Moon et al discloses for the purpose of improving the efficiency of air cooling/heating devices, a thermoelectric converter 100 connected to a heat sink 210 being used in combination with an air conditioner (see figures 1, 2 & abstract).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to design the combined system above and to modify the invention by applying the invention to an air conditioner for the purpose of improving the efficiency of air cooling/heating devices as disclosed by Moon et al.

Allowable Subject Matter

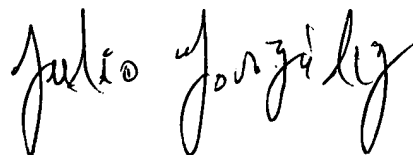
8. Claims 9, 10, 11, 12, 13 and 16 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Julio C. Gonzalez whose telephone number is 571-272-2024. The examiner can normally be reached on M-F (8AM-5PM).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Darren Schuberg can be reached on 571-272-2044. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

A handwritten signature in black ink, appearing to read "Julio Gonzalez", with a stylized, cursive script.

Julio C. Gonzalez
Examiner
Art Unit 2834

Jcg
June 13, 2005